٢١/٠٤/١٤٣٣

Objectives

- Definition and Types of pain.
- Pathophysiology of Chronic Pain.
- Management of Cancer Pain.
  - *-Pharmacotherapy.*
  - *-Interventional pain therapy.*

أ.د. محمد يونس مخاريطة
أستاذ م. علاج الألم بطب المنصورة

Cancer Pain Management

Dr. Mohamed Younis Makharita

Assistant professor of Anesthesia, ICU and Pain Management.

Faculty of Medicine - Mansoura University

Master Degree in Pain Management - NCI Cairo University.

Types of Pain

- Nociceptive/inflammatory pain: coming from peripheral tissue (skin, muscles, or bones).
- Visceral pain: Pain originating from viscera.
- Neuropathic pain: Pain due to injury or disturbance in the nervous system.
- Cancer pain: combined Pain originating from more than one of the above mentioned sites.

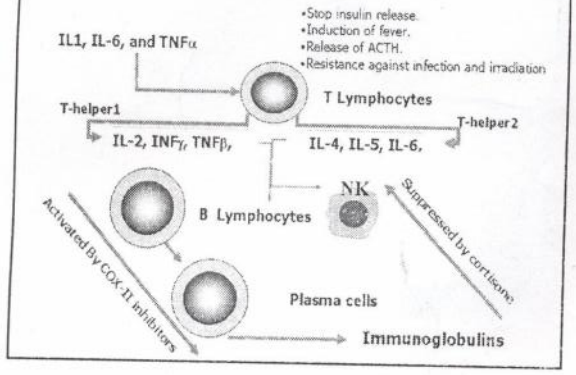
Identification of the type of pain is important as the mechanism of pain, and hence the treatment is different from each other.

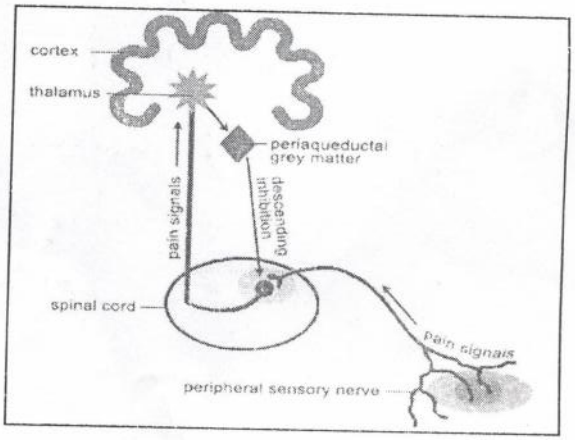
IASP Definition of Pain

Pain is unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage.

أ.د. محمد يونس مخاريطة
أستاذ م. علاج الألم بطب المنصورة

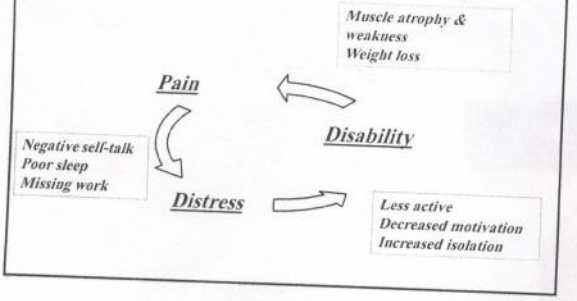
Immunity: Cytokine Cascade

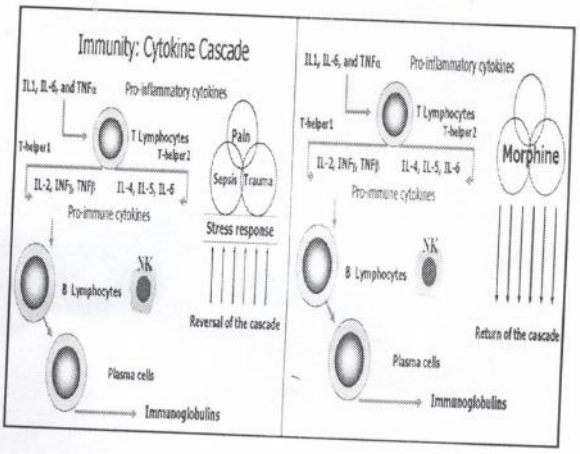




٢١/٠٤/١٤٣٣

The Pain Cycle





Pain Management

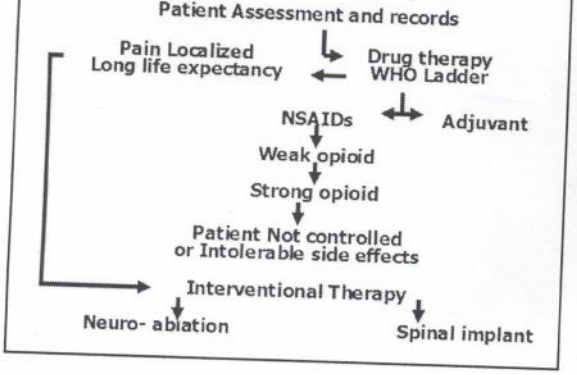
Management of Cancer Patient

Bio-psycho-social Model of Pain

Interdisciplinary team approach

- Phsicians (..+..+..)
- Psychologist.
- Physiotherapist.
- Occupational Therapist.
- Nurse.
- Social worker.

Plan of Management



Pain Assessment

Site of pain .
Character of pain.
Started since.
Style of pain:
-constant
-paroxysmal: onset.duration.frequency.
Accompained symptoms.
Severity: by VAS or Verbal Rating score

أ.د. محمد يونس مخاريطة
أستاذ م. علاج الألم بحقب المنصورة

General roles for Drug management

- Optimization of drug therapy:
  - Right analgesic.
  - Right dose.
  - Right schedule.
  - Right co-analgesic.
- Individualization for each patient.
- Opioid Rotation if there is side effects.
- Anticipation of breakthrough pain.
- Prevention of side effect.

WHO PRINCIPALS

- *By Mouth.*
- *By Clock.*
- *By Ladder.*
- *Individualized .*
- *Use Adjuvants.*

Opioid Analgesics

- No Ceiling Effect.
- No serious morbidity on long term treatment in cancer pts.

Morphine Sulphate

- **MST 30 mg**

- Active Metabolies

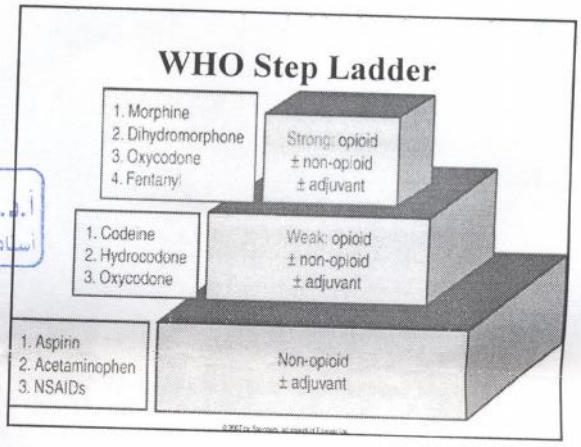
M6G analgesic (60%)SE..N,V,
Resp Depression

M3G Anexity and opioid antagonist effect…..Tolerance

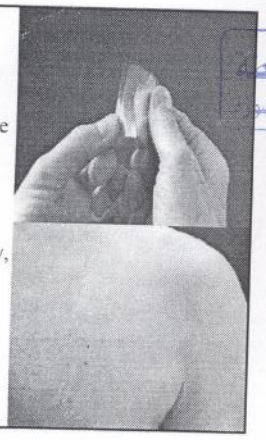
- Contraindicated in RF

أ.د. محمد يونس مخاريطة
أستاذ م. علاج الألم بطب المنصورة

WHO Step Ladder

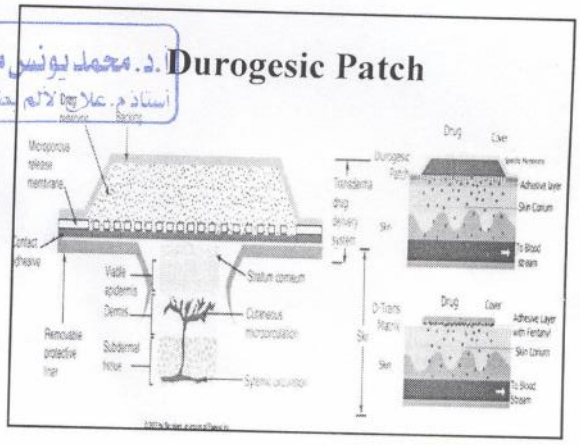


- The novel D-TRANS® drug-in-adhesive matrix combines improved adhesion, with reliable and sustained fentanyl delivery
- D-TRANS® is smaller, thinner, more flexible and easier to apply, thereby improving wearability
- Used in RF.



أ.د. محمد يونس مخاريطة
أستاذ م. علاج الألم بطب المنصورة

Durogesic Patch



What can further be done?

Initial treatment is medical

Interventional Therapy

Neuro-ablation techniques

Rhizolysis
Celiac Plexus Block
Splanchnic nerve block
Superior Hypogastric Plexus Block
Ganglion Impar Block
Stellate Ganglion Block
Lumber Sympathetic Block

Neuraxial Therapy

Spinal implants

Adjuvant Drugs

Antidepressants
Anticonvulsants
Muscle relaxants
Oral local Anesthetic
Corticosteroids
Calcitonin and Bisphosphonates
Anti-emetics and Laxatives

Neuro-DESTRUCTIVE PROCEDURES.

Includes:

- Chemical Neurolysis.
- Radiofrequency ablation.
- Cryo- freezing.

Chemical Neurolysis

- Alcohol: absolute / 50%.
- Phenol: 5-6%in glycerin /6-10% in saline.
- Chlorocresol: 2% in glycerin.

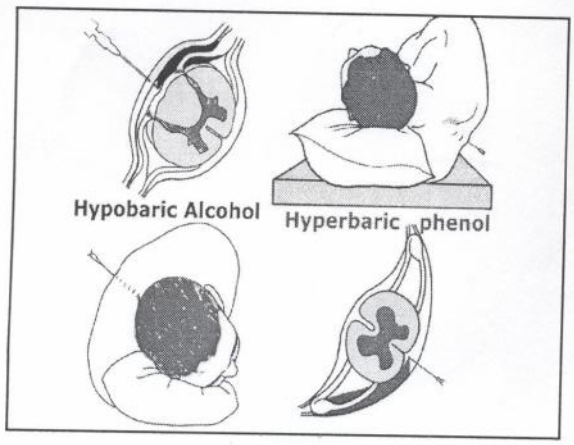
Neuro-DESTRUCTIVE PROCEDURES

Indications

Neuroablative techniques can be used early in the natural history of cancer pain.

- In presence of focal somatic lesions (rib metastases)
- In certain visceral pain (e.g. pancreatic cancer)
- In certain neuropathic pain states (e.g. craniofacial neuralgia).

أ.د. محمد يونس مخاريطة
أستاذ م. علاج الألم بطب المنصورة



Rhizolysis

Subarachnoid Neurolytic Block

At the root There is separation of sensory and motor fibers.

Rhizolysis Used in treating cancer pain WITH:

- Life expectancy 6-12 months.
- Failure of analgesic management.
- Pain is localized to dermatome(s).
- Pain is somatic in origin.
- The patient and the family should understand precisely details, side effects, and complication of the block.

أ.د. محمد يونس مخاريطة
أستاذ م. علاج الألم بطب المنصورة

Celiac Plexus Block

Indication

- Pain relief in cancer pancreas or other upper gastrointestinal tract neoplasm using Alcohol.
- **Therapeutic CPB** with local anesthetic

-To relief epigastric pain following hepatic artery embolization for inoperable hepatic malignancies.

-To reduce gastrointestinal stasis in intensive care patients.

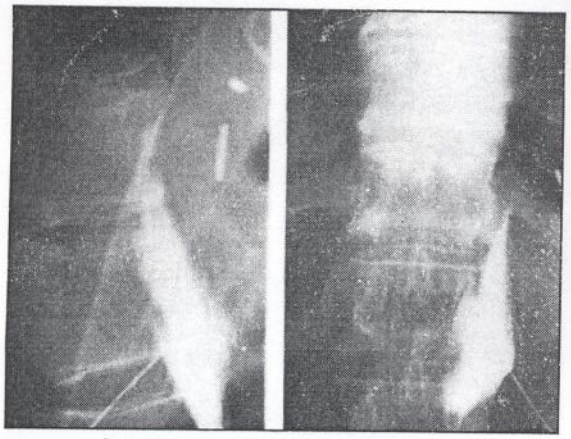
- **In chronic pancreatitis** ????

Complication

- Hypotension
- Pain.
- Abdominal spasm.
- Diarrhoea
- Wrong injection.
- Paraplegia (1/683)
- Sexual disfunction.

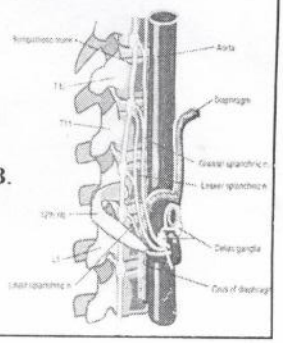
يونس مخاريطة
الألم بطب المنصورة

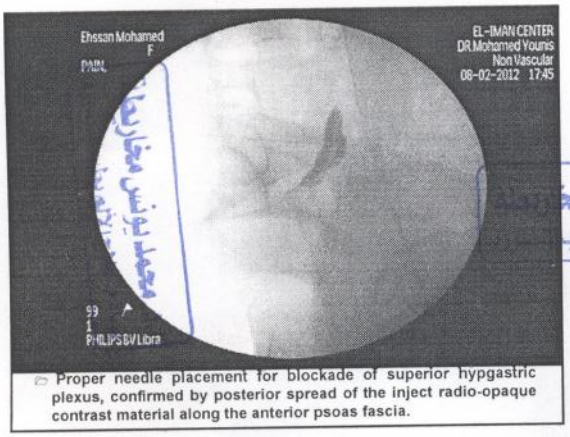
محمد يونس مخاريطة
أستاذ م. علاج الألم بطب المنصورة



Splanchnic nerve block

Alternative technique, which is useful when malignancy has distorted the antero-crural anatomy and resulted in a failed **CPB**.



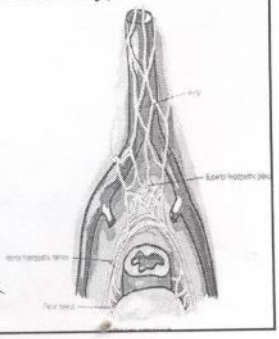


Proper needle placement for blockade of superior hypgastric plexus, confirmed by posterior spread of the inject radio-opaque contrast material along the anterior psoas fascia.

Superior Hypogastric Plexus Block

(presacral neurectomy)

It transmits afferent sensory supply of descending and sigmoid colon ,rectum, ,vaginal fundus, bladder, prostate, prostatic urethera, testes, seminal vesicles, uterus and ovaries.



Indication:

Deep visceral pelvic pain.

1-Cancer

2-Non cancer: -Endometriosis

- interstitial cystitis

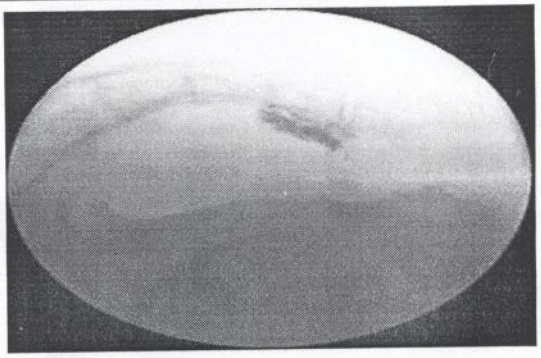
Ganglion Impar Block

- Blockade of the ganglion impar used for managing intractable perineal pain of sympathetic origin.
- Sympathetically mediated pain in the perineal region is usually vague and poorly localized and is commonly accompanied by sensations of burning and urgency.
- The sympathetic component of these pain syndromes derives, at least in part, from this structure.

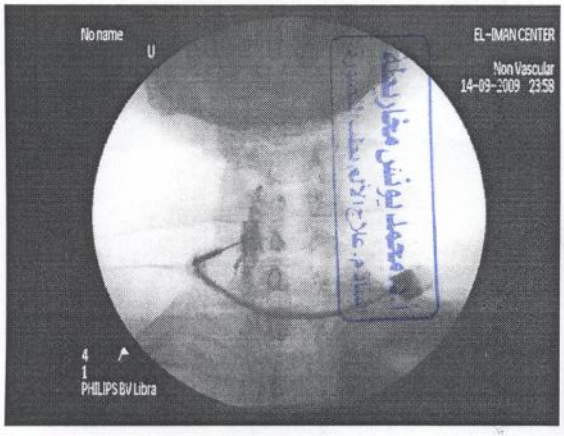
Stellate Ganglion Block

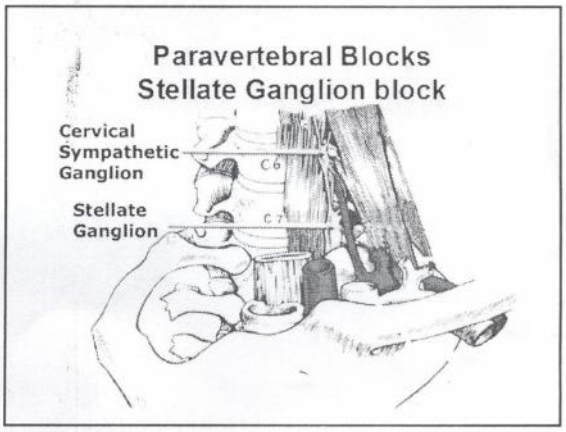
Indication

- Treatment of pain conditions such as **CRPS**, Reynald disease, acute herpes zoster, post-herpetic neuralgia and post-thoracotomy shoulder pain.
- Prognostic block prior to surgical left stellate ganglionectomy in the congenital long QT syndrome.
- Hyperhydrosis



Lateral view demonstrating proper needle placement, confirmed by the smooth-margined configuration of contrast.

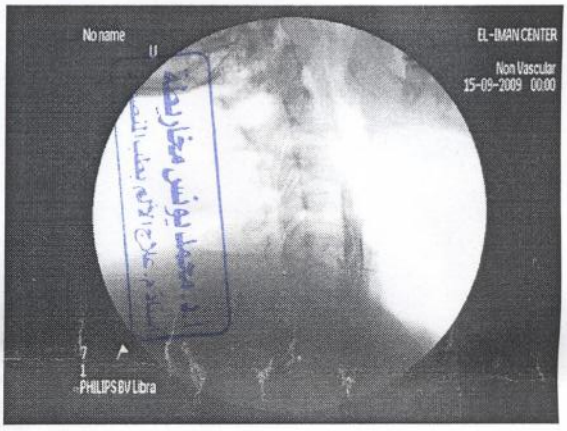


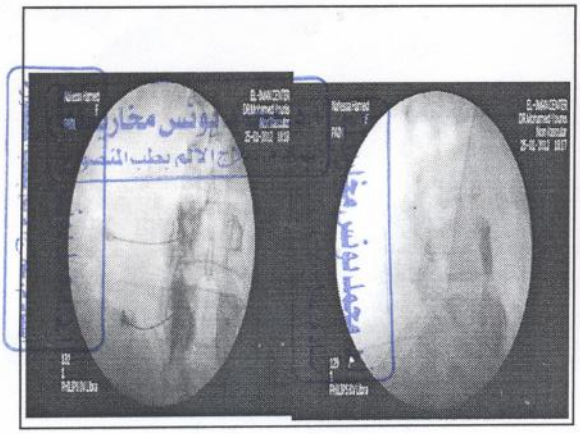


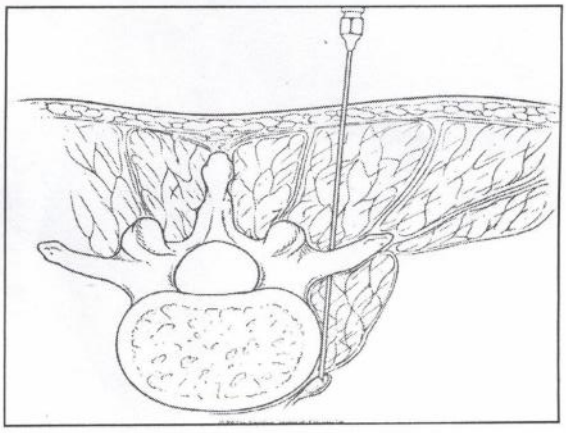
Lumber Sympathetic Block

Indications:

- CRPS
- Inoperable peripheral vascular disease with rest pain.
- Rectal tenesmus.
- Vascular ischaemia secondary to cannulation in the paediatric intensive care setting.
- Chronic venous leg ulcers, Chronic extremity pain in failed lumbar surgery or Buerger's disease **does not** respond well to **LSB**.







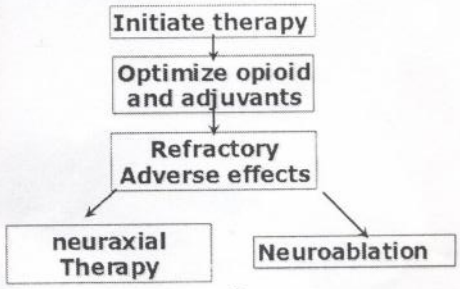
Neuraxial Therapy

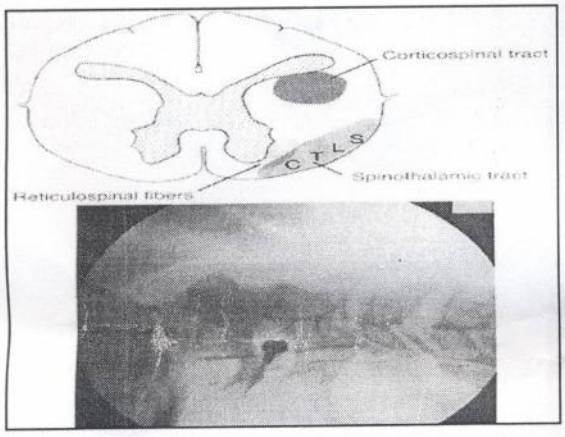
Indications:

- In severe pain that cannot be controlled with systemic drugs because of dose-limiting toxicity
- When there is immediate need for a local anesthetic (some types of neuropathic pain); after failed neuroablation; or when patient preference indicates its use .

أ.د. محمد يونس مخاريطة
أستاذ م. علاج الألم بطب المنصورة

neuraxial Therapy





Neuraxial Drug Delivery Systems

i. Percutaneous Catheter (Type 1)

ii. Percutaneous Catheter with Subcutaneous tunneling (Type 2)

iii. Subcutaneous ports with completely internalized catheters (Type 3)

iv. Totally Implanted Catheter With Implanted Reservoir and Manual Pump (Type 4)

v. Totally Implanted Catheter with Implanted Infusion Pump (Type 5)

In Conclusion

- Cancer Pain represent a challenge.
- It need Interdisciplinary team approach.
- Medical Treatment is the corner stone in the management.
- Opioids are the most effective therapy.
- Adjutant drugs are a must.
- Interventional Pain Therapy used when it is appropriate.

أ.د. محمد يونس مخاريطة
أستاذ م. علاج الألم بطب المنصورة